

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) An optical recording medium comprising a substrate and a light transmission layer and further comprising a first dielectric layer having a thickness of 3 nm to 80 nm, a first recording layer containing one element selected from the group consisting of Si, Ge, Sn, Mg, C, Al, Zn, In, Cu, Ti and Bi as a primary component, a second recording layer containing one element selected from the group consisting of Cu, Si, Al, Zn and Ag and different from the element contained in the first recording layer as a primary component and a second dielectric layer having a thickness of 3 nm to 80 nm between the light transmission layer and the substrate, wherein the second recording layer is formed to be in contact with the first recording layer, and wherein the first dielectric layer is formed to be in contact with the first recording layer and the second dielectric layer is formed to be in contact with ~~with, a recording layer provided on the substrate and a dielectric layer provided adjacent to the~~ second recording layer, the optical recording medium being constituted such that a laser beam having a wavelength λ thereonto from a side of the light transmission layer and that when the laser beam it is projected thereonto via ~~irradiated with a laser beam having a wavelength λ via an~~ objective lens having a numerical aperture NA satisfying $\lambda / NA \leq 640$ nm so that the power of the laser beam is equal to or higher than 1.5 mW at the surface of the optical recording medium, the element contained in the first recording layer as a primary component and the element contained in the second recording layer as a primary component are mixed with each other, thereby forming from the side opposite from the substrate, a record mark and crystallized regions ~~are is formed in the first dielectric layer and the second dielectric recording layer, and a~~ crystallized region is formed in the dielectric layer, the crystallized regions being adjacent to the record mark.

2.-4. (Cancelled)

5. (Currently Amended) An optical recording medium in accordance with Claim 12, wherein the first recording layer contains an element selected from the group consisting of Si, Ge and Sn as a primary component.

6. (Cancelled)

7. (Currently Amended) An optical recording medium in accordance with Claim 12, wherein the second recording layer is added with an element selected from the group consisting of Cu, Al, Zn, Ag, Mg, Sn, Au, Ti and Pd and different from the element contained in the first recording layer as a primary component.

8-20. (Cancelled)

21. (Previously Presented) The optical recording medium of claim 1 wherein the record mark has a different reflection coefficient than its surrounding regions in the recording layer.

22. (Currently Amended) An optical recording device, after irradiation with an energy beam, comprising:

a substrate;

a light transmission layer;

a bilayer overlying the substrate, said bilayer including a first recording layer and a second recording layer in contact with each other, said bilayer further having a record mark the first recording layer containing one element selected from the group consisting of Si, Ge, Sn, Mg, C, Al, Zn, In, Cu, Ti and Bi as a primary component, the second recording layer containing one element selected from the group consisting of Cu, Si, Al, Zn and Ag and different from the element contained in the first recording layer as a primary component; and

a first dielectric layer overlying the bilayer, the first dielectric layer being substantially transparent to pass the energy beam therethrough; said first dielectric layer having a first crystallized region adjacent to the record mark; the first dielectric layer having a thickness of 3 nm to 80 nm, and

a second dielectric layer having a thickness of 3 nm to 80 nm between the light transmission layer and the substrate, wherein the second recording layer is formed to be in contact with the first recording layer, and wherein the first dielectric layer is formed to be in contact with the first recording layer and the second dielectric layer is formed to be in contact with the second recording layer, the optical recording medium being constituted such that a laser beam having a wavelength λ thereonto from a side of the light transmission layer and that when the laser beam is projected thereonto via an objective lens having a numerical aperture NA satisfying $\lambda / NA \leq 640$ nm so that the power of the laser beam is equal to or higher than 1.5 mW at the surface of the optical recording medium, the element contained in the first recording layer as a primary component and the element contained in the second recording layer as a primary component are mixed with each other, thereby forming a record mark and crystallized regions are formed in the first dielectric layer and the second dielectric layer, the crystallized regions being adjacent to the record mark.

23. (Previously Presented) The optical recording device of claim 22 wherein the record mark and the first crystallized region form an irradiated region having a reflective coefficient different from its surrounding regions.

24-29. (Cancelled)

30. (Currently Amended) The optical recording device of claim ~~22~~27 the first recording layer comprises Si and the second recording layer comprises Cu.

31. (Previously Presented) The optical recording device of claim 22 wherein the first dielectric layer comprises ZnS and SiO₂.

32. (Cancelled)

33. (Currently Amended) The optical recording device of claim ~~22~~24 wherein the second dielectric layer comprises ZnS and SiO₂.

34. (Cancelled)

35. (Previously Presented) The optical recording device of claim 22 wherein the bilayer is between about 2nm to 40nm thick.

36. (Cancelled)